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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/081,628	02/20/2002	Ingmar Dorn	LeA 35,240	1917

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EXAMINER

PEZZUTO, HELEN LEE

ART UNIT PAPER NUMBER

1713

DATE MAILED: 07/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/081,628

**Applicant(s)**

DORN ET AL.

**Examiner**

Helen L. Pezzuto

**Art Unit**

1713

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) 16-19 and 31-33 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15, 20-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-33 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 5/13, 8/21/2002.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

1. Applicant's election with traverse of Group I, claims 1-15, and 20-30 in the reply filed on 4/23/04 are acknowledged. The traversal is on the ground(s) that the examination of the three groups of claims would not constitute a significant additional burden on the examiner. This is not found persuasive because the inventions of group II and III contains features which distinguishable from the intermediate polymer product in Group I. The additional features clearly requires search in technological areas outside of polymer chemistry, hence, would place a significant burden on the office.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 16-19, and 31-33 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected inventions, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/23/04.

Claims 1-15, 20-30 are currently under consideration in this application

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

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The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 2-5, 11, 13, 20-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On what basis is the recited ranges of mEq based on or in reference to?

The recited "average molar mass" defining a polymer is indefinite, and should be defined by one of the standard types (Mw, Mn, etc).

In claim 13, which monomer contains the polymeric component P which is an essential component defined in claim 1?

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. Claims 1, 7-10, 12, 14, and 30 rejected under 35

U.S.C. 102(b) as being anticipated by Letourneur et al. (US-712).

US 4,950,712 to Letourneur et al. discloses a process in the modification of polymers derived from crosslinked polystyrene (substituted and unsubstituted) and dextrans with utility in molecular recognition and purification. Specifically prior art teaches substitution of one or more functional linkages into the base polymer (col. 1, line 30 to col. 6, line 44). Among the substituted linkages taught are those comprising phosphate residues (A1) and phospholipids (A4), separated by spacer defined in prior art disclosure, thus, meeting the requirement set forth in claim 1. Prior art further disclose up to 50 parts by weight of copolymer units in the crosslinked base polymer, including those of hydrophilic origin (col. 3, lines 40-58). The reference discloses and exemplifies sequential reactions in producing the various modified product, which embraces the process steps expressed in claims 14-15, and 30, thus, anticipating the instant claims.

7. Claims 1-8, 11-12, 14-15, 20-30 are rejected under 35

U.S.C. 102(b) as being anticipated by EP 0 238 853.

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EP-853 discloses a process for producing phosphonated polymer via a transamidation between acrylamide (co)polymers and a chemical reactant defined in formula I. In addition to the amine and phosphonated functional groups, the chemical reactant may also contain other functional groups which embraces the instant F and U groups as claimed. Prior art further discloses modified polymer products having the instant molecular weight. The recited amounts of F, A, U, and the sequential process steps expressed in claims 14 and 30 are expressively disclosed and exemplified in the reference, thus, anticipating the instant claims.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claims 2-5, 11, 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Letourneur et al. (US-712) as discussed above and further in view of the following.

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Prior art may be silent regarding some embodiments of the recited proportions and the resulting molecular weight of the modified polymers. The examiner is of the position that since the general conditions of forming the modified polymers are disclosed in the prior art, discovering the optimum or workable ranges would involve only routine skill in the art because the selection of suitable amount of the respective modifying functional groups and the resulting molecular weight would be readily envisaged by one skilled in the art in light of the common endeavor (i.e. molecular recognition) between prior art and the instant invention.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

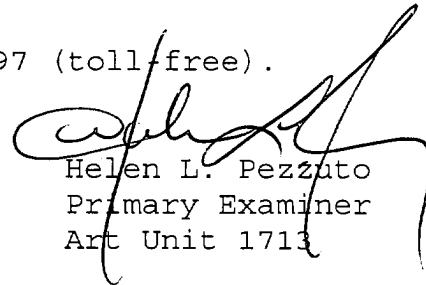
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen L. Pezzuto whose telephone number is (571) 272-1108. The examiner can normally be reached on 8 AM to 4 PM, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen L. Pezzuto  
Primary Examiner  
Art Unit 1713

hlp